

Attachment B

End results: mark leave trees with orange non-tracer paint to the specifications listed in the following table.

Tree marking requirements - sufficient orange paint is to be applied to each tree to identify it as a leave tree when viewed from any angle from up to 10 feet away from the tree. A stump mark is to be applied on the downhill side of the tree, in crevices and on the bole of the tree, be at least 6 inches in length on the tree and extend onto the ground for at least 6 inches in one continuous paint strip.

Units: All                      Acres: 1,538

Tree Species Abbreviations:

PP - Ponderosa Pine  
DF - Douglas-fir  
RC - Western Red Cedar  
WL - Western Larch  
GF - Grand fir  
LP - Lodgepole Pine  
AF - Alpine Fir  
ES - Engelmann Spruce  
IC - Incense Cedar

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Treatment Units	Acres	Specifications	<p>Skips: Unless otherwise noted, all trees within 25 feet (<math>\pm 3'</math>) of a tree that has Orange paint above and below stump height are to be left standing. Orange painted trees are not to be cut.</p> <p>Gaps: 1) YELLOW PAINT - All trees, except dead standing and nonconiferous trees, within 50 feet (<math>\pm 5'</math>) of a tree that has Yellow paint above and below stump height are designated for cutting. Yellow painted trees are to be left standing.</p> <p>2) ASPEN - All trees, except dead standing, nonconiferous, and <u>healthy</u> western larch (WL) and ponderosa pine (PP), within 100 feet (<math>\pm 10'</math>) of an aspen clone are designated for cutting.</p> <p>3) LARGE LARCH / PINE - All trees, except dead standing, non-coniferous trees and healthy WL / PP, within 50 feet (<math>\pm 5'</math>) of a greater than 21 inch dbh WL / PP are designated for cutting.</p>	<p>Thinning DxPre Stocking Level: Outside Skips and Gaps, leave desirable trees (see definition) to meet stocking levels. Unless otherwise noted, the average residual basal area within the DxPre thinning area of a unit shall be within the range specified in the table below. Use the low end of the basal area range for areas of the unit with smaller trees and the high end of the range for areas with larger trees and/or cedar swales.</p>	Comments
All	All	All trees greater than 21 inches DBH shall be left standing.		<p>Leave trees as a mix of single trees and clumps of 2-4+ trees to meet the desired spatial pattern. When leaving cedar and spruce, leave them in clumps of 4-10 trees. Trees of other species may be used to make a clump; it is allowable to leave healthy cedar/spruce as single trees.</p>	LP over 6" dbh and all other tree species (hardwoods included) over 7" dbh count toward DxPre stocking level target.

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10	53	Leave all PP; Do not retain AF / GF / LP	na	3 YELLOW painted gaps; ASPEN	50-80 ft <sup>2</sup> BA/acre	Areas with abundant AF / GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
12	145	na	Orange marked trees are individual leave trees that denote outer boundary of a skip. Trees within the interior of orange marked skip boundary are leave trees.	na	na	All leave trees were marked with YELLOW except >21" dbh trees, skip boundaries, and skip interiors
13	54	Leave all PP	na	na	na	All leave trees marked except PP and >21" dbh trees
15	85	Leave all PP; Do not retain GF	Outside of Gaps, mark 10 skips up to ¼ acre in size in areas dominated by AF/GF/ES/RC.	12 YELLOW painted gaps	50-70 ft <sup>2</sup> BA/acre	
30	12	na	na	Entire Unit	na	All leave trees marked except >21" dbh trees
47	13	Leave Select Trees; Leave all PP / WL unless already marked with blue paint	na	LARGE LARCH / PINE	60-90 ft <sup>2</sup> BA/acre	2 select trees in unit. Blue paint signifies cut tree.
49	41	Leave all PP / WL; Do not retain GF / LP	na	6 YELLOW painted gaps	60-80 ft <sup>2</sup> BA/acre	Areas with abundant GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
50	28	Leave all PP / WL; Do not retain GF / LP	na	6 YELLOW painted gaps; LARGE PINE	60-80 ft <sup>2</sup> BA/acre	Areas with abundant GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.

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53	16	Leave all ES / RC / PP	na	4 YELLOW painted gaps	60-80 ft <sup>2</sup> BA/acre	na
54	4	Orange painted trees = individual leave tree	NO SKIPS - orange paint = individual leave trees	na	70-90 ft <sup>2</sup> BA/acre	Orange marked trees count toward DxPre stocking level target.
61	17	Leave all PP / WL unless already marked in blue	na	LARGE LARCH / PINE	60-90 ft <sup>2</sup> BA/acre	Areas with blue paint do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
91	63	Leave all PP; Do not retain AF / GF / LP	5 skips	8 YELLOW painted gaps; ASPEN; LARGE LARCH	60-80 ft <sup>2</sup> BA/acre	Areas with abundant AF / GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
92	24	Leave all PP; Do not retain GF	2 skips	2 YELLOW painted gaps; ASPEN	60-80 ft <sup>2</sup> BA/acre	na
94	26	Leave all PP; Do not retain AF / GF / LP	na	5 YELLOW painted gaps; ASPEN; LARGE LARCH / PINE	50-70 ft <sup>2</sup> BA/acre	Areas with abundant AF / GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
95	69	Leave all PP / ES; Do not retain AF / GF / LP	4 skips	8 YELLOW painted gaps; LARGE PINE	60-90 ft <sup>2</sup> BA/acre	Areas with abundant AF / GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
96	88	Leave all PP / WL / ES (unless already marked in blue); Do not retain AF / GF / LP	na	LARGE LARCH / PINE	60-80 ft <sup>2</sup> BA/acre; blue marked areas may be less than 60 ft <sup>2</sup> BA/acre but not less than 30 ft <sup>2</sup> BA/acre	

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97	76	Leave all WL; Do not retain GF / LP; orange painted trees = individual leave tree	<b>NO SKIPS</b> - orange paint = individual leave trees	8 YELLOW painted gaps; ASPEN; LARGE LARCH / PINE	70-90 ft <sup>2</sup> BA/acre	Emphasize preference of PP over DF in DxPre thinning areas. Orange marked trees count toward DxPre stocking level target.
98	50	Leave all PP; Do not retain AF / GF / LP	na	10 YELLOW painted gaps; LARGE LARCH / PINE	60-80 ft <sup>2</sup> BA/acre; 80- 100 ft <sup>2</sup> BA/acre within cedar swales	Clump cedar within swales.
99	40	Leave all ES / WH	no orange paint in unit	Entire Unit	na	Over 21" dbh trees not marked
100	76	Leave all ES	7 skips	YELLOW marked trees are individual leave trees without a 50 foot cutting zone around them.	30-120 ft <sup>2</sup> BA/acre	Apply the low end of the basal area range to areas with low vigor trees or severe insect / disease problems. Leave high end of BA range in areas with large trees and/or cedar swales. Do not leave uniform spacing - focus on leaving desirable trees regardless of spacing.
101	79	Leave all ES / RC	6 skips	8 YELLOW painted gaps	60-90 ft <sup>2</sup> BA/acre	na
102	135	Leave all PP	6 skips	21 YELLOW painted gaps; LARGE LARCH / PINE	60-90 ft <sup>2</sup> BA/acre	na

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103	36	Leave all PP	5 skips	10 YELLOW painted gaps	60-80 ft <sup>2</sup> BA/acre	na
105	13	Leave all PP; Do not leave AF / GF / LP; orange painted trees = individual leave tree	NO SKIPS - orange paint = individual leave trees	LARGE LARCH / PINE	60-90 ft <sup>2</sup> BA/acre	na
106	21	Leave all PP; Do not leave AF / GF / LP; orange painted trees = individual leave tree	NO SKIPS - orange paint = individual leave trees	LARGE LARCH / PINE	60-90 ft <sup>2</sup> BA/acre	Areas with abundant AF / GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
107	79	Leave all PP		7 YELLOW painted gaps	60-90 ft <sup>2</sup> BA/acre; 90- 110 ft <sup>2</sup> BA/acre within cedar swales	na
108	47	Leave all ES / PP; Do not leave GF	3 skips	9 YELLOW painted gaps	60-90 ft <sup>2</sup> BA/acre	na
109	32	Do not leave AF / GF / LP	2 skips	8 YELLOW painted gaps; ASPEN	60-80 ft <sup>2</sup> BA/acre	Within DxPre thinning areas, emphasize retention of WL over other species.
110	11	Do not leave AF / GF / LP	na	LARGE LARCH / PINE	60-80 ft <sup>2</sup> BA/acre	Areas with abundant AF / GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.
112	21	Orange painted trees = individual leave tree	NO SKIPS - orange paint = individual leave trees	na	na	All leave trees marked except >21" dbh trees

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200	38	Do not leave GF	na	4 YELLOW painted gaps (the cut zone from yellow painted trees south of Road 9500550 shall not extend north of Road 9500550)	60-80 ft <sup>2</sup> BA/acre	na
201	2	Leave all ES / WH	no orange paint in unit	Entire Unit	na	Over 21" dbh trees not marked
202	15	Leave all ES / RC / PP	na	na	60-80 ft <sup>2</sup> BA/acre; 80-100 ft <sup>2</sup> BA/acre within cedar swales	na
203	3	Leave all PP; Do not leave AF / GF / LP	na	na	60-80 ft <sup>2</sup> BA/acre	na
392	16	Leave all PP; Do not retain GF	na	1 YELLOW painted gap; ASPEN; LARGE LARCH / PINE	60-80 ft <sup>2</sup> BA/acre	na
591	15	Leave all PP / WL; Do not retain AF / GF / LP	na	LARGE LARCH / PINE	60-90 ft <sup>2</sup> BA/acre	Areas with abundant AF / GF / LP do not count toward DxPre stocking level - in these areas leave the best available desirable trees.

**DEFINITIONS**

Abundant: Where cutting all of the conifer species designated as "do not retain" would result in a stocking level below the specified level in Attachment B even without harvesting any other trees.

Aspen Clone: Three (3) or more live aspen trees greater than 5.0 inches DBH that are within 20 feet of each other.

Calendar Days: Every: day shown on the calendar, Saturdays, Sundays and holidays included.

Cedar Swale: A depressed, relatively flat (0-5% slope) area that is moist and that is dominated by western red cedar in the overstory.

Chipping and Grinding: Use of mechanized equipment to reduce slash and non-merchantable material to a size which will meet local mill utilization standards and then are hauled off site.

Clump: Two or more trees with touching crowns.

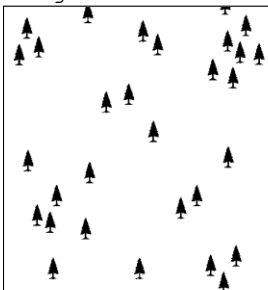
Contract Administrator: The on-site contract administrator for the Mandatory and Option work items who represents the Contracting Officer. The duties and responsibilities of the CA are defined in the letter of designation issued by the Contracting Officer.

Contract Time: See Period of Performance.

Damage: Defect or deformity of a tree resulting from agents such as wind, snow, animals, insects, disease, and equipment, and evidenced by such things as dead or broken tops or trunks, crooks, and deep scars or damage to the bark on more than  $\frac{1}{4}$  of the circumference of the tree.

Designation of Sawtimber: In all timber harvest units sawtimber has been designated for cutting with a blue paint band at, or above, DBH and a butt mark below stump height; or designated as leave trees with an orange paint band at, or above, DBH and a butt mark below stump height. Merchantable trees to be removed in the Optional Units will be designated by the Contractor as per specifications supplied by the Forest Service.

Desirable Spatial Pattern: Trees within the thinning areas shall be left as a mix of singles and clumps of 2 to 10 trees (see the figure below). Most clumps shall include 2 to 4 trees. When leaving cedar and hemlock, leave them in clumps of 4 to 10 trees to prevent damage from wind throw and sun scald - trees of other species may be used to make these clumps; it is acceptable to leave occasional healthy cedar/spruce as single trees.





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DBH (Diameter Breast Height): A point on the bole of a tree 4.5 feet above the ground measured on the up hill side.

Ladder Fuel Reduction: Cutting and/or removal of small diameter (<7.0 DBH) trees growing under other more desirable trees to reduce risk of fire moving from the ground to the tree crowns.

Leave Trees: Trees not designated for removal or other prescribed treatment.

Lop and Scatter: An intermediary treatment conducted prior to piling, underburning, or jackpot burning. Lop and scatter consists of bucking and possibly limbing of trees to increase fuel consumption during burning, reduce the height of the residual slash in the unit, or to facilitate piling or decomposition.

Low Vigor: Trees with one or more of the following: <30% LCR, fading or chlorotic crowns, Hawkworth's dwarf mistletoe rating of 3 or greater, root disease, successful bark beetle attack, and/or height-to-diameter (HT'/DBH') ratios greater than 80 (tall, skinny trees or noodles).

Period of Performance: (also Performance Period or Contract Time). The number of calendar days allowed in the contract for completion of contract work.

Quality Assurance: The actions taken by the Government to assess the results to determine that they meet contract requirements. The methods for quality assurance are described in the Quality Assurance Surveillance Plan (QASP).

Quality Control: Those actions taken by a Contractor to control the production of outputs to ensure that they conform to the contract requirements.

Slash (existing and created): Boles of cut trees, tops and/or limbs created by the Contractor's operations are created slash. Existing includes all woody material already dead on site which has to be treated to meet the end results.

Severe insect or disease problems: Trees with **mistletoe** in more than half the crown (Hawksworth rating 3 or greater). Brooms, cankers, and swellings on stems and branches are indicators of mistletoe. Mistletoe is common in western larch and Douglas-fir.

Trees showing symptoms of **root disease** should be removed. Frequently these trees are Douglas fir near a root disease centers (an area of dead broken off trees). Indicators of root disease include a white fungus growing between the bark and the wood, resin flow at the base of the tree and/or a lighter color crown with fewer needles, when compared to other Douglas fir in the area. Fading crowns and/or sap flow from the bole of Douglas-fir and grand fir. Grand fir with **scolytus** scars on both sides of the tree. Numerous pitch tubes where **bark beetles** have bored into tree (usually Lodgepole). Symptoms of mountain pine beetles are small red to yellowish pitch tubes (less than one-fourth inch) and boring dust in bark crevices and round the base of the tree.

Thinning: The process of selecting and leaving the largest, most fire resistant trees (including those showing good health characteristics), to meet the average spacing rate listed for the units.

Trees that are selected to be left to meet the stocking level specified shall be desirable leave trees. The Contractor shall first select the most desirable species of trees as defined in item 1 below. The Contractor shall then select the most desirable

leave trees as defined in item 2 below. In areas where there are not enough trees with the most desirable characteristics available to meet the specified stocking level, the Contractor shall select less desirable leave trees listed in item 2.

Desirable Trees:

1. Most Desirable Tree(s): Trees that possess the following characteristics shall be the first choice for leave trees:
  - A. Dominant and Co dominant Preferred Species (in order of preference): ponderosa pine (PP), western larch (WL), Douglas-fir (DF), and western red cedar (RC). Dominant and co-dominant trees are taller on the average when compared to neighboring trees. These trees are not severely suppressed.
  - B. Healthy: Foliage on conifers shall be dark green in color, with a full crown over one third or more of the tree. These trees are not overly tall and skinny.
  - C. Free of Severe Insect or Disease Damage: see the definition for trees with severe insect or disease problems.
  - D. In addition to above described trees retain western white pine, aspen, birch, and cottonwood of any size.
2. Less Desirable Leave Trees: When the prescribed stocking level of most desirable leave trees cannot be achieved with trees that possess the most desirable characteristics, the Contractor shall select leave-trees with less desirable characteristics in the priority listed below:
  - A. Minor Defect: Preferred species with minor defect such as sharp crook, a small amount of animal damage, or mistletoe in less than half the crown (Hawksworth rating 1 or 2).
  - B. Dominate, Co-dominate ES, WH, GF, having desirable tree characteristics.
  - C. Intermediate preferred species followed by intermediate non-preferred species having desirable tree characteristics. Intermediate trees are usually  $\frac{1}{2}$  to  $\frac{3}{4}$  the height of dominate/co-dominate trees.
  - D. Crowded Trees: Trees within a few feet of a dominant tree, often leaning away from the larger tree.
  - E. Other Live Trees: Trees other than insect or disease damaged trees with at least 35% live crown.
  - F. Physical Damage: Trees that have physical damage on half or more of the bole circumference and greater than three feet in length. Physical damage may be caused by equipment, falling trees, lightning, wind, animals, etc.

Piling: Creating clean, burnable piles from fuel materials on site.

Spacing: The horizontal distance from the trunk of one leave tree to the trunk of the next nearest leave tree. Average spacing is calculated from the leave trees per acre.

Stream course: The area along a stream with riparian vegetation and other riparian characteristics. Stream courses are noted on the Contract Area Map.

Vigor/Growth: Relative health and growth of forest trees. Leave-tree preference shall favor trees possessing relatively high vigor/growth, free of disease and defect over trees with relatively poor vigor and growth, regardless of specie preference. For example, a RC with a healthy crown will be favored over a similarly-sized DF with a faded crown. If the two trees possessed similar vigor/growth characteristics, the DF shall be the preferred leave tree.

Whip felling: The cutting of all trees in the mandatory units which are not designated to leave, do not meet AT.2 specifications, are not included as KT-CT2.11 material for removal or are taller than 24 inches in height above the ground.